

تمرین شماره ۷ مدرسه MLOps فیلاگر / رسول وحدتی

```

rasool@ubuntuuserver1:~/exercise_07$ docker build -t flask-app:latest .
[+] Building 2.7s (10/10) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 175B
=> [internal] load metadata for docker.io/library/python:3.9-slim
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/4] FROM docker.io/library/python:3.9-slim@sha256:27211e8bbfd2c91ac9adbd0e0565b9ac18234b4fcd8e06ea3404f4d04f26ea13
=> [internal] load build context
=> => transferring context: 230B
=> CACHED [2/4] WORKDIR /app
=> CACHED [3/4] COPY .
=> CACHED [4/4] RUN pip install --no-cache-dir -r requirements.txt
=> exporting to image
=> => exporting layers
=> => writing image sha256:9f03e99be78d35a2b67365a9edb8324b3085924fe5497a9e747f34c00fac3a79
=> naming to docker.io/library/flask-app:latest
rasool@ubuntuuserver1:~/exercise_07$ docker images
REPOSITORY   TAG       IMAGE ID      CREATED        SIZE
flask-app    latest   9f03e99be78d  5 minutes ago  136MB
rasool@ubuntuuserver1:~/exercise_07$

```


```

rasool@ubuntu:~$ docker tag flask-app:latest vahdati/flask-app:latest
rasool@ubuntu:~$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: vahdati
Password:
WARNING! Your password will be stored unencrypted in /home/rasool/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
rasool@ubuntu:~$ docker push vahdati/flask-app:latest
The push refers to repository [docker.io/vahdati/flask-app]
fc277cd32613: Pushed
e614ee46f73c: Pushed
bbad4bf37819: Pushed
337337a89bc6: Mounted from library/python
6e1edc42bbcc: Mounted from library/python
da6d0b38dea6: Mounted from library/python
4e4419592731: Mounted from library/python
e0781bc8667f: Mounted from library/python
latest: digest: sha256:d631c8fda3940fda31e4bea347fab040be4194eb9a57e8a9aa015fdeb25ca6 size: 1994
rasool@ubuntu:~$


```

 **dockerhub**


Explore


Repositories


Organizations


 Search Docker Hub


ctrl+K












vahdati

▼

Search by repository name



All Content

▼

Create repository

vahdati / flask-app

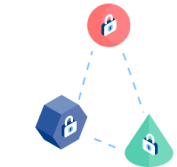
Contains: Image • Last pushed: 1 minute ago

☆ 0

↓ 0

Public

Scout inactive



Create An

Organization

Create and manage users and grant access to your repositories.

```

rasool@ubuntu:~/exercise_07$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
rasool@ubuntu:~/exercise_07$ docker pull vahdati/flask-app:latest
latest: Pulling from vahdati/flask-app
efc2b5ad9eac: Already exists
7464ec8699ac: Already exists
1a6e97f2166a: Already exists
27f64c4bf844: Already exists
1d44c5b3324e: Already exists
7cceb3e5fd2b: Already exists
e0cefd62950f: Already exists
dbc0c37de1d0: Already exists
Digest: sha256:1f234658695f8028916dbb8dd3d2f68e1c06058e712839d77e0756462f794e53
Status: Downloaded newer image for vahdati/flask-app:latest
rasool@ubuntu:~/exercise_07$ docker run -p 5000 vahdati/flask-app
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit

```

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```

rasool@ubuntu:~/exercise_07$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
vahdati/flask-app latest 3f03e99be78d 29 minutes ago 136MB
rasool@ubuntu:~/exercise_07$ docker pause flask-app
flask-app
rasool@ubuntu:~/exercise_07$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
6a40febf2353 vahdati/flask-app "python app.py" 53 seconds ago Up 52 seconds (Paused) 0.0.0.0:5000->5000/tcp, :::5000->5000/tcp flask-app
50cb6b7a77cf vahdati/flask-app "python app.py" 3 minutes ago Exited (0) About a minute ago vigorous_varaha
amihira
960e495604ca vahdati/flask-app "python app.py" 7 minutes ago Exited (0) 3 minutes ago funny_solomon
rasool@ubuntu:~/exercise_07$ docker unpause flask-app
flask-app
rasool@ubuntu:~/exercise_07$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
6a40febf2353 vahdati/flask-app "python app.py" About a minute ago Up About a minute 0.0.0.0:5000->5000/tcp, :::5000->5000/tcp flask-app
50cb6b7a77cf vahdati/flask-app "python app.py" 4 minutes ago Exited (0) 2 minutes ago vigorous_varaha
amihira
960e495604ca vahdati/flask-app "python app.py" 8 minutes ago Exited (0) 4 minutes ago funny_solomon
rasool@ubuntu:~/exercise_07$

```

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```

rasool@ubuntu:~/exercise_07$ docker save -o flask-app.tar vahdati/flask-app:latest
rasool@ubuntu:~/exercise_07$ cd ..
rasool@ubuntu:~/exercise_07$ mkdir dest-flask-app
rasool@ubuntu:~/exercise_07$ mv flask-app.tar /dest-flask-app
mv: cannot stat 'flask-app.tar': No such file or directory
rasool@ubuntu:~/exercise_07$ mv flask-app.tar ./dest-flask-app
rasool@ubuntu:~/exercise_07$ cd dest-flask-app/
rasool@ubuntu:~/dest-flask-app$ ls
flask-app.tar
rasool@ubuntu:~/dest-flask-app$ docker load -i flask-app.tar
Loaded image: vahdati/flask-app:latest
rasool@ubuntu:~/dest-flask-app$ docker run --name load-flask-app -p 5000:5000 vahdati/flask-app
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit

```

تست اینکه واقعا flask پس از لود مجدد داکر در حال اجرا می باشد:

```

rasool@ubuntu:~/exercise_07$ curl http://localhost:5000
Hello from Flask!
rasool@ubuntu:~/exercise_07$

```

```

rasool@ubuntu:~/docker_compose$ docker compose up --build
WARN[0000] /home/rasool/docker_compose/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 9/9
  ✓ redis Pulled 11.3s
  ✓ c6a83fedfae6 Pull complete 2.2s
  ✓ 9d56419430d6 Pull complete 2.2s
  ✓ 9d36ad935203 Pull complete 2.6s
  ✓ 0085610e8e12 Pull complete 2.7s
  ✓ 6c8161c30f9c Pull complete 9.1s
  ✓ ba03bb8a47bb Pull complete 9.2s
  ✓ 4f4fb700ef54 Pull complete 9.2s
  ✓ 5d7c7efa14ca Pull complete 9.3s
[+] Building 1.3s (10/10) FINISHED docker:default
=> [web internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 175B 0.0s
=> [web internal] load metadata for docker.io/library/python:3.9-slim 0.6s
=> [web internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [web 1/4] FROM docker.io/library/python:3.9-slim@sha256:27211e8bbfd2c91ac9adbde0565b9ac18234bfcde8ef0e6a3404fd404f26ea13 0.0s
=> [web internal] load build context 0.0s
=> => transferring context: 131B 0.0s
=> CACHED [web 2/4] WORKDIR /app 0.0s
=> CACHED [web 3/4] COPY . . 0.0s
=> CACHED [web 4/4] RUN pip install --no-cache-dir -r requirements.txt 0.0s
=> [web] exporting to image 0.1s
=> => exporting layers 0.0s
=> => writing image sha256:d2325d0ca0fb62a210d92c96caac8fdaf823b4e21e73921756d63c0ba42364d0 0.0s
=> => naming to docker.io/library/docker_compose-web 0.0s
=> [web] resolving provenance for metadata file 0.0s
[+] Running 3/3
  ✓ Network docker_compose_default Created 0.2s
  ✓ Container docker_compose-redis-1 Created 3.2s
  ✓ Container docker_compose-web-1 Created 0.1s
Attaching to redis-1, web-1
redis-1 | 1:C 30 Jul 2024 22:49:45.090 # WARNING Memory overcommit must be enabled! Without it, a background save or replication may fail under low memory condition. Being disabled, it can also cause failures without low memory condition, see https://github.com/jemalloc/jemalloc/issues/1328. To fix this issue add 'vm.overcommit_memory = 1' to /etc/sysctl.conf and then reboot or run the command 'sysctl vm.overcommit_memory=1' for this to take effect.
redis-1 | 1:C 30 Jul 2024 22:49:45.090 * oOoOoOoOoOoOoOoOo Redis is starting oOoOoOoOoOoOoOoOo
redis-1 | 1:C 30 Jul 2024 22:49:45.091 * Redis version=7.4.0, bits=64, commit=00000000, modified=0, pid=1, just started
redis-1 | 1:C 30 Jul 2024 22:49:45.091 # Warning: no config file specified, using the default config. In order to specify a config file use redis-server /path/to/redis.conf
redis-1 | 1:M 30 Jul 2024 22:49:45.092 * monotonic clock: POSIX clock_gettime
redis-1 | 1:M 30 Jul 2024 22:49:45.094 * Running mode=standalone, port=6379.
redis-1 | 1:M 30 Jul 2024 22:49:45.095 * Server initialized
redis-1 | 1:M 30 Jul 2024 22:49:45.095 * Ready to accept connections tcp
web-1 | * Serving Flask app 'app'
web-1 | * Debug mode: off
web-1 | WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
web-1 | * Running on all addresses (0.0.0.0)
web-1 | * Running on http://127.0.0.1:5000
web-1 | * Running on http://172.18.0.3:5000
web-1 | Press CTRL+C to quit

```

```

rasool@ubuntu:~/docker_compose$ cd docker_compose/
rasool@ubuntu:~/docker_compose$ docker compose ps
WARN[0000] /home/rasool/docker_compose/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
NAME                IMAGE                COMMAND                SERVICE    CREATED        STATUS        PORTS
docker_compose-redis-1  redis:alpine        "docker-entrypoint.s..."  redis      5 minutes ago  Up 5 minutes  0.0.0.0:6379->6379/tcp, :::6379->6379/tcp
docker_compose-web-1   docker_compose-web  "python app.py"         web        5 minutes ago  Up 5 minutes  0.0.0.0:5000->5000/tcp, :::5000->5000/tcp

```

```

rasool@ubuntu:~/docker_compose$ docker compose down --rm all
WARN[0000] /home/rasool/docker_compose/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 5/5
  ✓ Container docker_compose-web-1 Removed 0.0s
  ✓ Container docker_compose-redis-1 Removed 0.7s
  ✓ Image redis:alpine Removed 0.1s
  ✓ Image docker_compose-web:latest Removed 0.0s
  ✓ Network docker_compose_default Removed 0.1s
rasool@ubuntu:~/docker_compose$ docker compose ps
WARN[0000] /home/rasool/docker_compose/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
NAME                IMAGE                COMMAND                SERVICE    CREATED        STATUS        PORTS
rasool@ubuntu:~/docker_compose$

```

به طور کلی در آدرس گوگل درایو زیر سه پوشه وجود دارد، پوشه exercise_07 تمامی کد نویسی های تمرین داکر تا قبل از ایجاد شدن فایل compose می باشد. پوشه docker_compose همان کدهای تمرین پوشه exercise_07 می باشد با این تفاوت که فایل yml هم به عنوان فایل compose اضافه شده است.

پوشه dest-flask-app همان فایل داکر تولید شده و ذخیره شده ای است که قرار بود در تمرین ۴ عملیات ذخیره سازی صورت گیرد.

https://drive.google.com/file/d/12gO3OGn9gdlt_RuyI0iJ6iSh2zVN_uyZ/view?usp=drive_link